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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,183	03/24/2005	Mitsumasa Kondo	268535US0PCT	1877

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OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER	
HON, SOW FUN	
ART UNIT	PAPER NUMBER
1772	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/30/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/529,183	KONDO ET AL.	
	Examiner	Art Unit	
	Sow-Fun Hon	1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-4 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-4 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 03/05.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Objection to Abstract

1. The abstract is objected to because it is too long and should be limited to a single paragraph on a separate sheet within the range of 50 to 150 words.

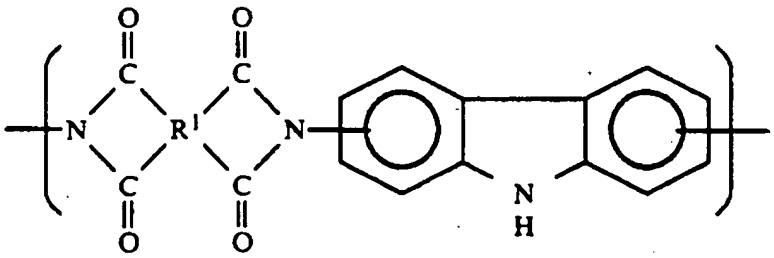
Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

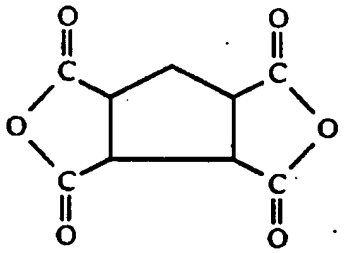
2. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawada (US 5,158,619).

Regarding claims 1 and 3, Kawada teaches a polymer which is a polyimide obtained by cyclodehydration of a polyamic acid (dehydrating to cause ring closure, column 4, lines 60-63), obtained by reacting one tetracarboxylic dianhydride with diaminocarbazole (column 4, lines 64-65), which is a diamine with the structure represented by formula (I) of Applicant, seen as the reacted component on the right hand side of the repeat unit of the polyamic acid of Kawada, shown on the next page, wherein X of Applicant = hydrogen atom, and Y^1 of Applicant = Y^2 of Applicant = primary amino group.



Kawada teaches that the tetracarboxylic dianhydride is represented by formula (II) of Applicant, wherein R of Applicant is a tetravalent organic compound having an alicyclic structure (Example 7, cyclopentanetetracarboxylic anhydride, column 7, lines 50-65, shown below).

7 Cyclopentanetetracarboxylic anhydride



The recitation " a liquid crystal alignment treating agent to obtain an alignment film for nematic liquid crystal by rubbing treatment after forming a coating film" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). See

MPEP 2111.02. In the instant case, the polymer of Kawada is formed from the same chemical components which have the same structural limitations claimed by Applicant.

Regarding claim 2, Kawada teaches that the diamine having a structure represented by formula (I) of Applicant, is 3,6-diaminocarbazole (column 6, lines 28-32).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawada as applied to claims 1-3 above, and further in view of Matsuo (US 3,994,567).

Kawada teaches a polyamic acid formed from a diamine having a structure represented by formula (I) of Applicant, and a tetracarboxylic dianhydride having a structure represented by formula (II) of Applicant; and a polyimide obtained by cyclodehydration of such a polyamic acid, as described above. In addition, Kawada teaches that the polyamic acid is applied to a substrate having an electrode to form a coating film (spin coating on a glass substrate having a light-transmissive electrode, column 9, lines 1-5), wherein the coating film is heated to form the polyimide (cause imidation, column 9, lines 18-24). Kawada fails to teach that the coating film is applied not just to one substrate having an electrode, but to a pair of substrates having electrodes, wherein the coating films are rubbed to form liquid crystal alignment films,

and nematic liquid crystal is sandwiched between the liquid crystal alignment films formed on the pair of substrates, to obtain a liquid crystal display device.

However, Matsuo teaches that polyamic acid formed from a diamine (column 4, lines 30-34) and tetracarboxylic dianhydride (carboxylic acid anhydride, column 4, lines 30-34, pyromellitic anhydride, 2,3,6,7-napthalenetetracarboxylic anhydride, column 4, lines 62-64) is applied to not just one substrate having an electrode, but a pair of substrates having electrodes (pair of electrode base plates, immersed in solution, column 12, lines 1-10), and then heat treated to form coating films of polyimide (column 12, lines 5-10), wherein the coating film surfaces are rubbed (orientated by rubbing it in one direction, column 12, lines 10-15) to form liquid crystal alignment films (column 2, lines 33-37), and nematic liquid crystal is then sandwiched between the liquid crystal alignment films formed on the pair of substrates (the two electrode base plates, column 14, lines 45-60), to obtain a liquid crystal display device (column 14, lines 45-60), for the purpose of utilizing the coating films to provide the desired alignment for the liquid crystal in the display.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have applied the coating film of Kawada to not just one substrate having an electrode, but to a pair of substrates having electrodes, wherein the coating films are rubbed to form liquid crystal alignment films, and nematic liquid crystal is sandwiched between the liquid crystal alignment films formed on the pair of substrates, to obtain a liquid crystal display device, in order to utilize the coating films to provide the desired alignment for the liquid crystal in the display, as taught by Matsuo.

Any inquiry concerning this communication should be directed to Sow-Fun Hon whose telephone number (571)272-1492. The examiner can normally be reached Monday to Friday from 10:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached on (571)272-1498. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

S. Hon

Sow-Fun Hon

01/05/07